

FIG. 2

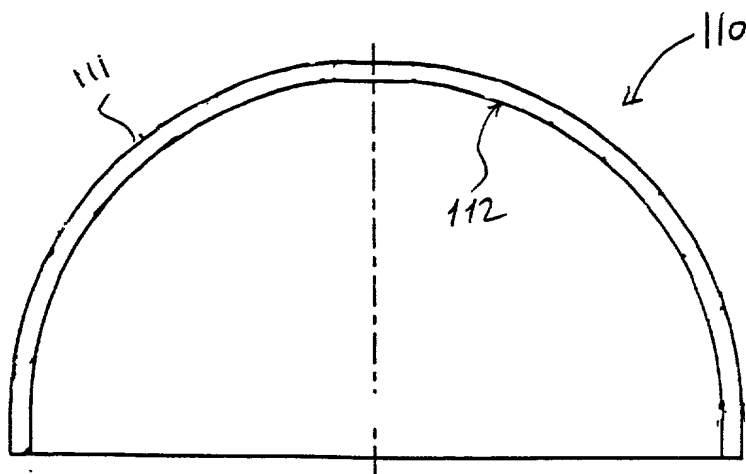


FIG. 4A

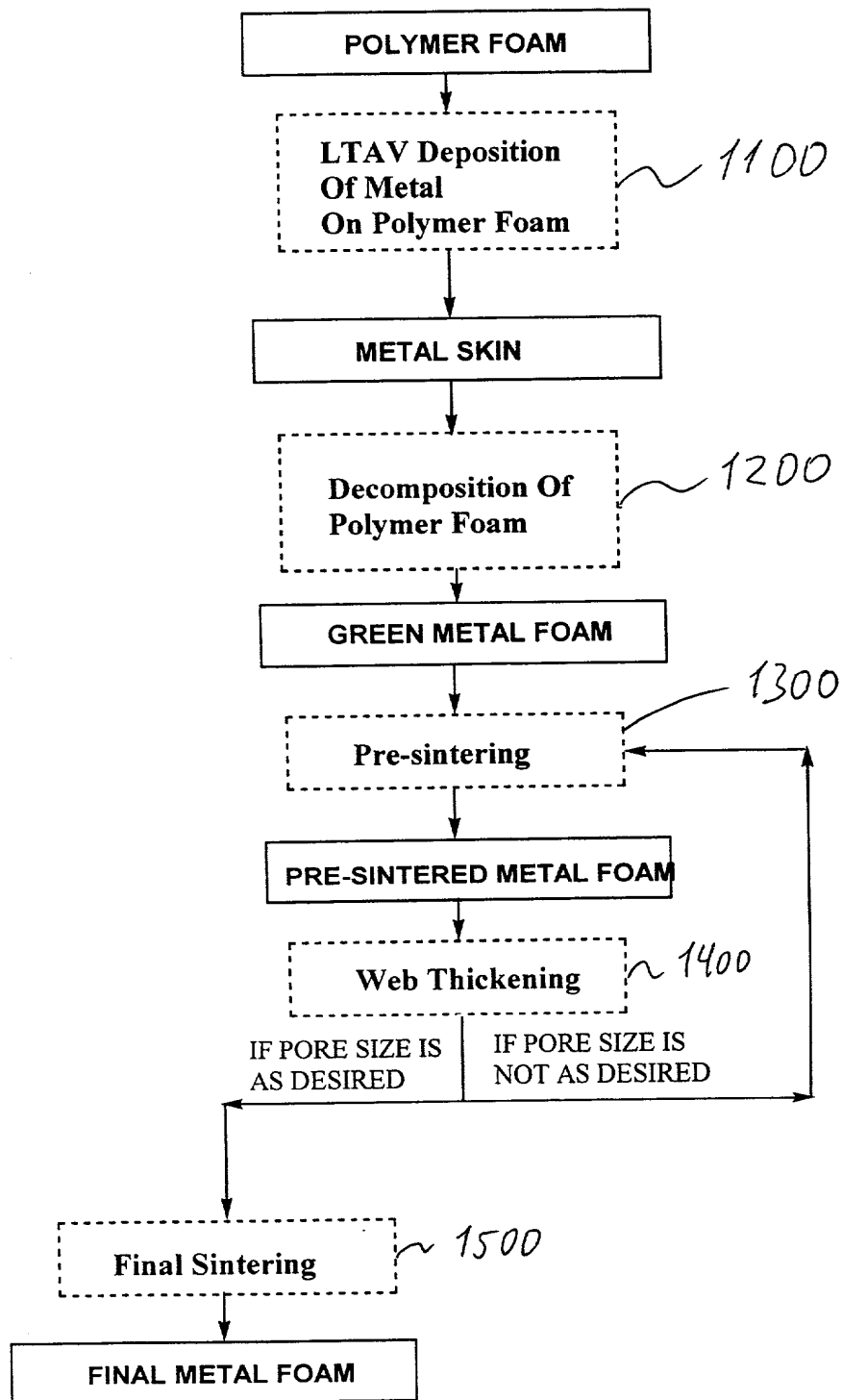
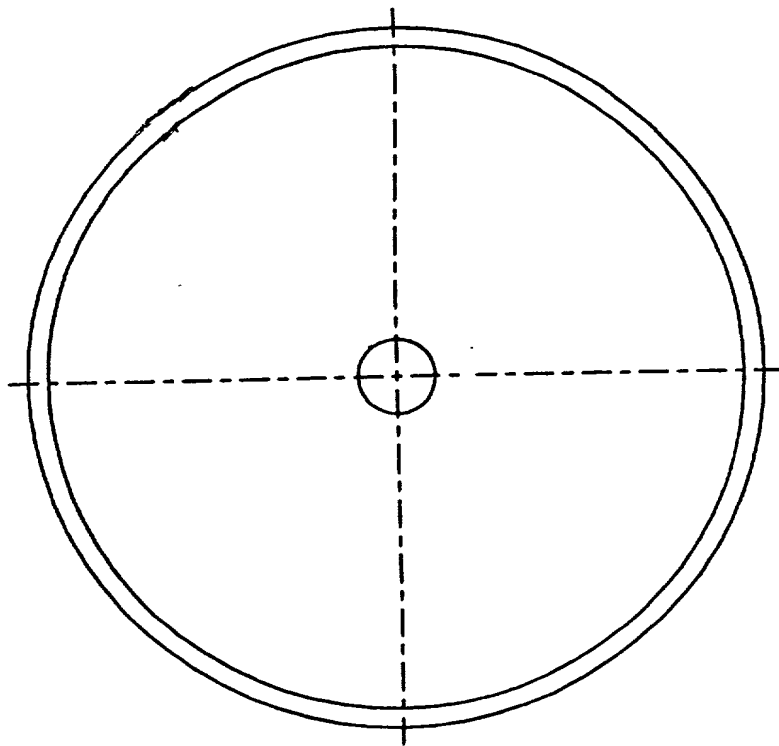


FIG. 3



110

FIG. 4B

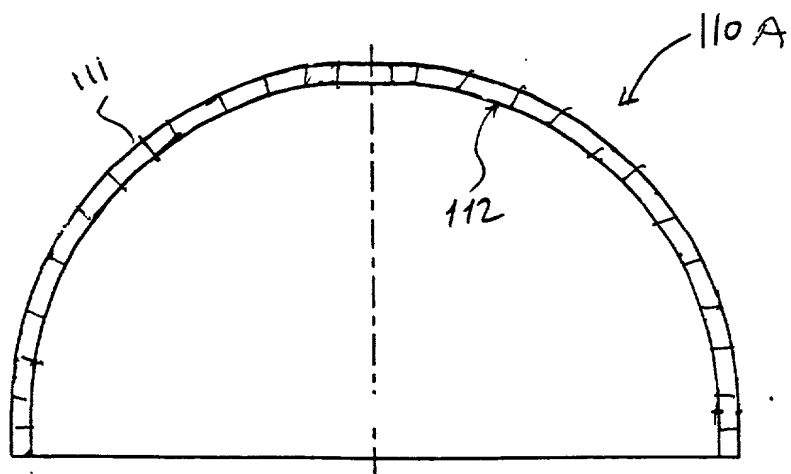
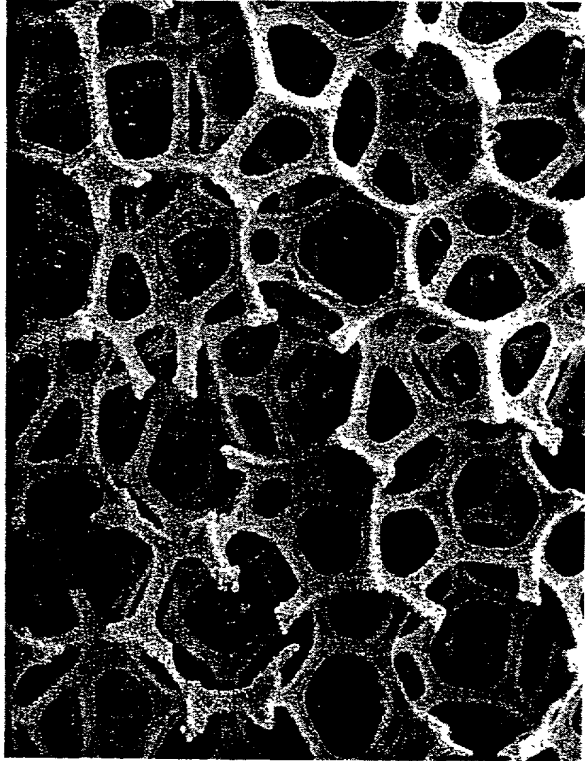
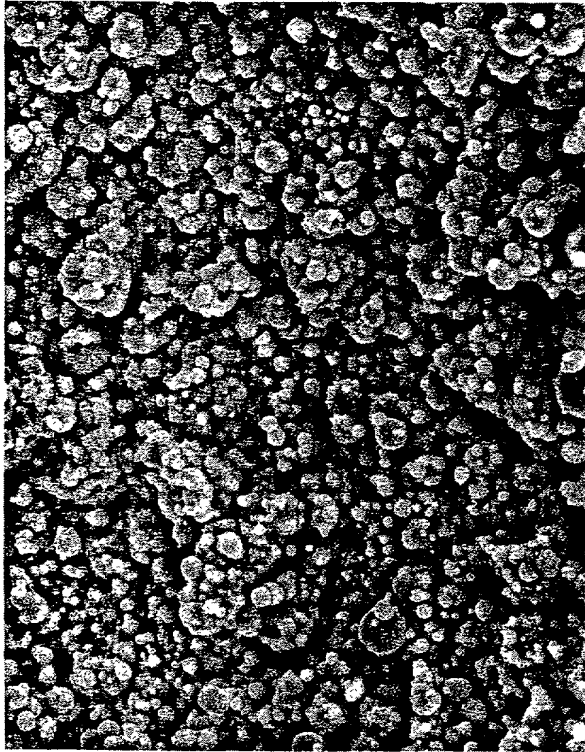


FIG. 4C

FIG. 5



25 X



1000 X

FIG. 5

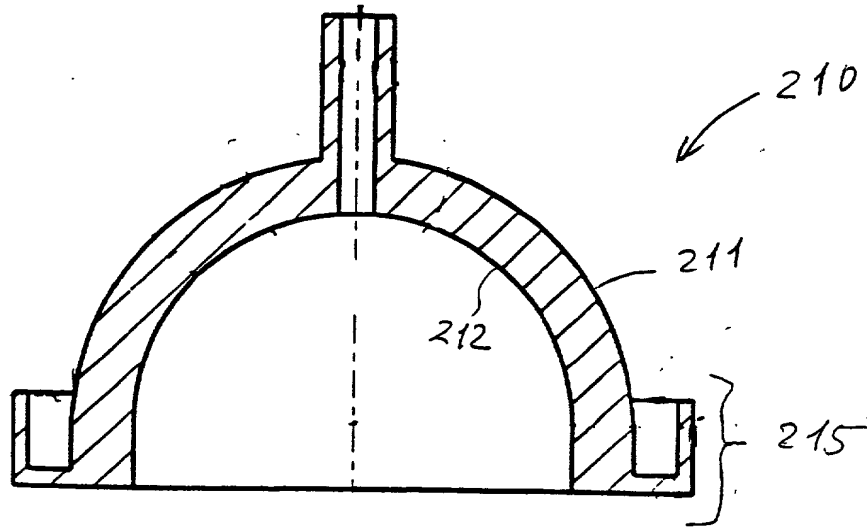


FIG. 6

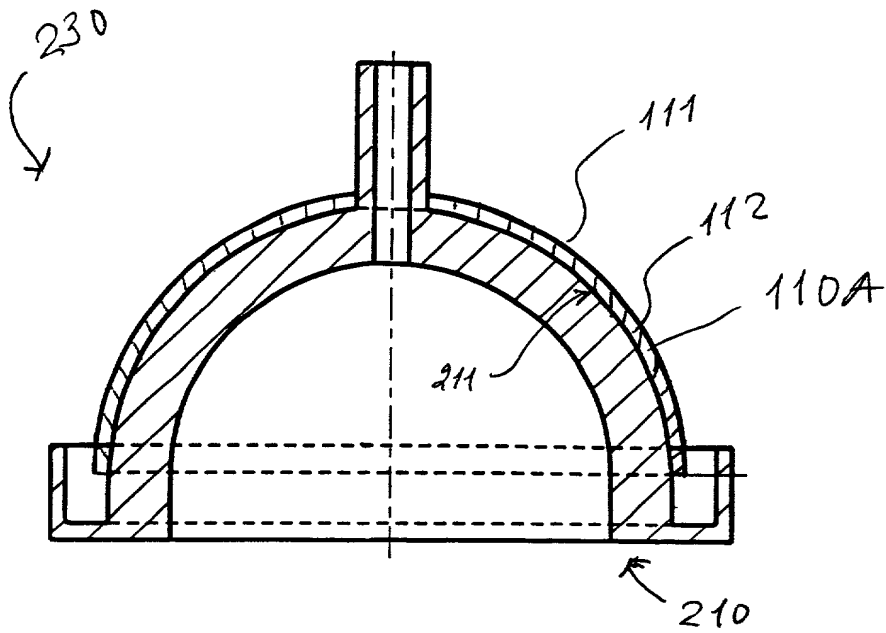


FIG. 7

FIG. 8 is a schematic diagram of a furnace system for processing a substrate. The system includes a furnace chamber 310, a substrate 230, and a heating element 312. The furnace chamber 310 is surrounded by a cooling jacket 314. The substrate 230 is positioned within the furnace chamber 310. The heating element 312 is located within the furnace chamber 310. The furnace chamber 310 is connected to a gas inlet 330 and a gas outlet 331. The furnace chamber 310 is also connected to a power supply 316. The furnace chamber 310 is maintained at a temperature of 600°C. The substrate 230 is maintained at a temperature of 1050-1150°C. The heating element 312 is maintained at a temperature of 1050-1150°C. The cooling jacket 314 is maintained at a temperature of 600°C. The gas inlet 330 and gas outlet 331 are maintained at a temperature of 600°C. The power supply 316 is maintained at a temperature of 600°C.

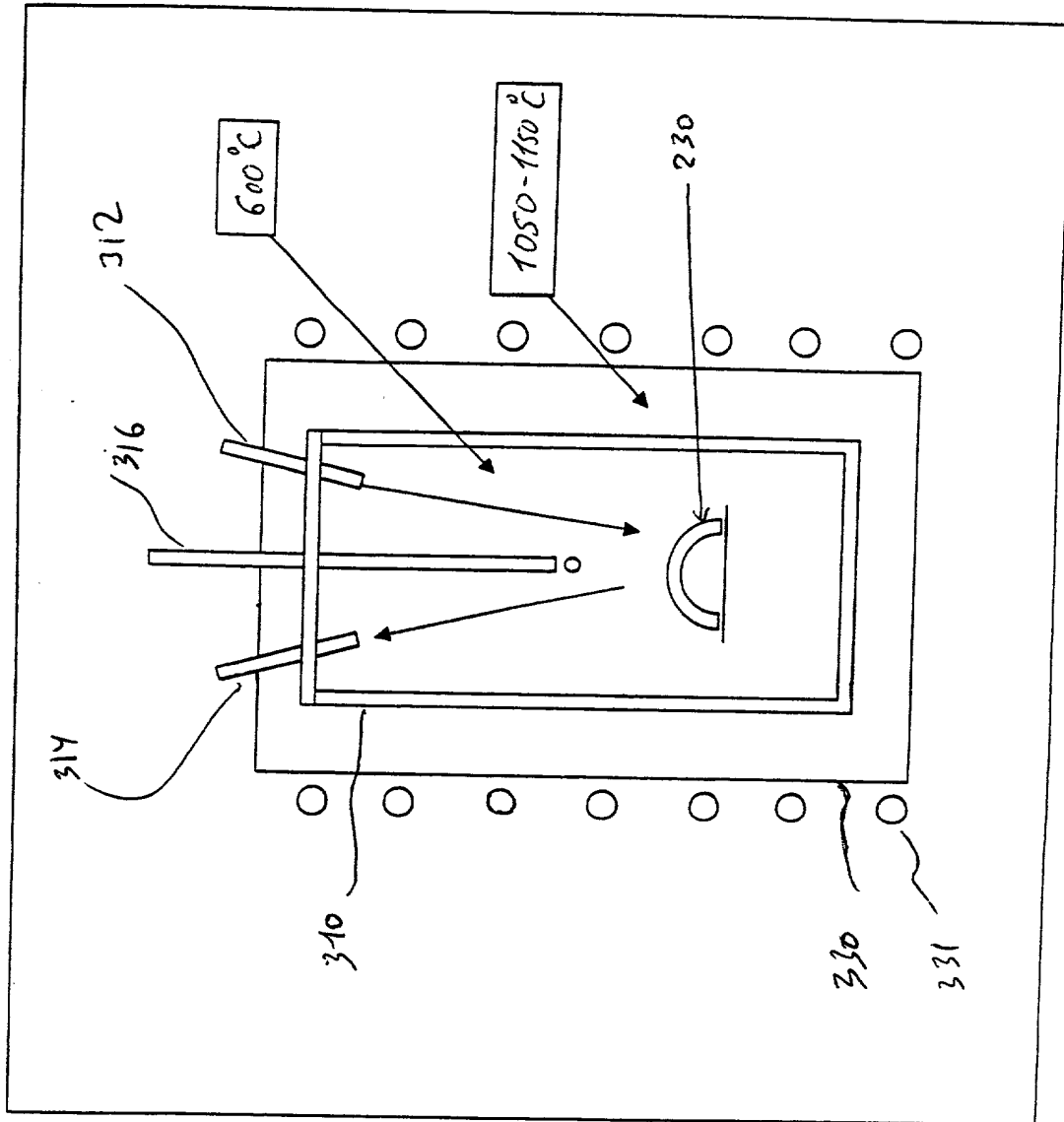


FIG. 8

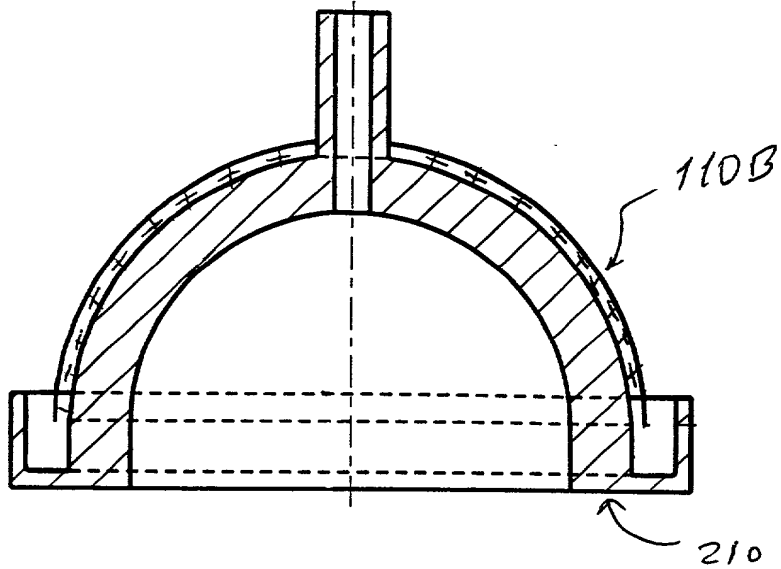
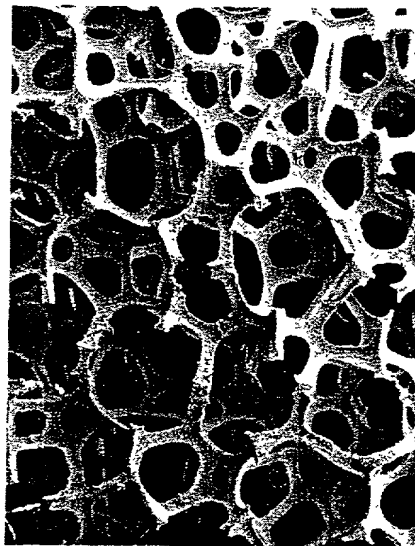
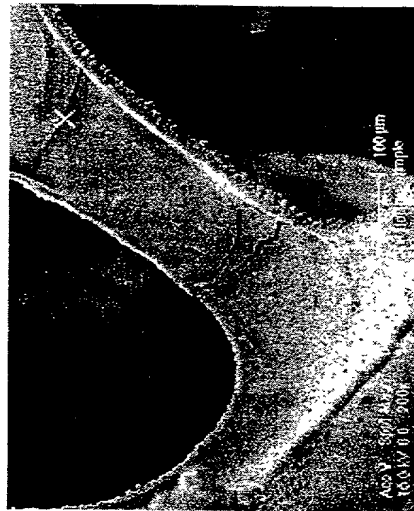


FIG. 9



25 X



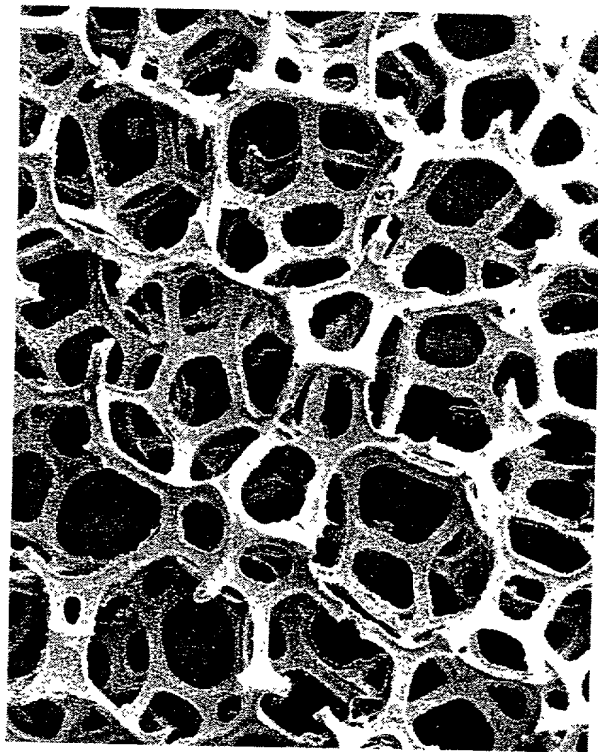
200 X



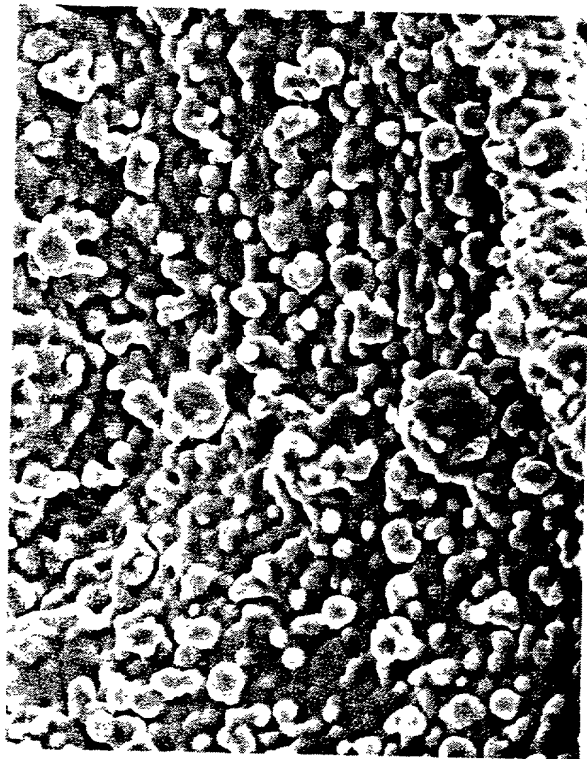
200 X

FIG. 10A

1000 X



25 X



1000 X

FIG. 10B

FIG. 11 is a flowchart illustrating a process for thickening metal foam.

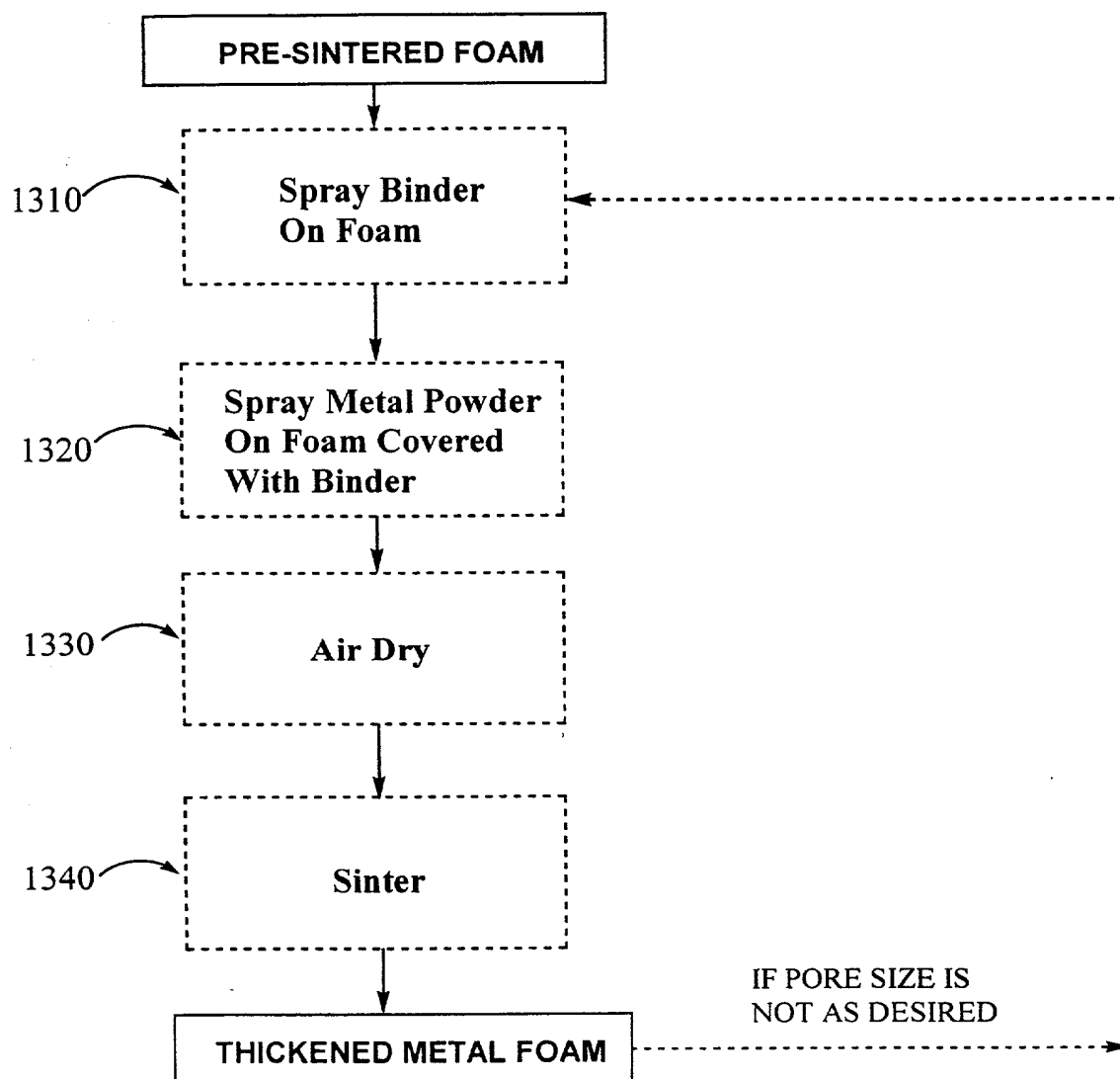


FIG. 11

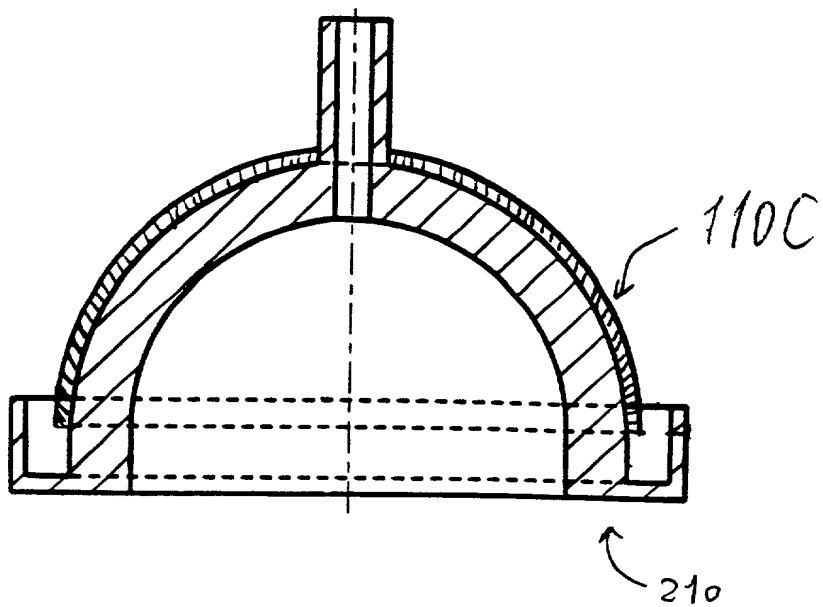


FIG. 12

SEI DETECTED
15.0 kV 45 29x 17.4 Final Sintered foam
1 mm

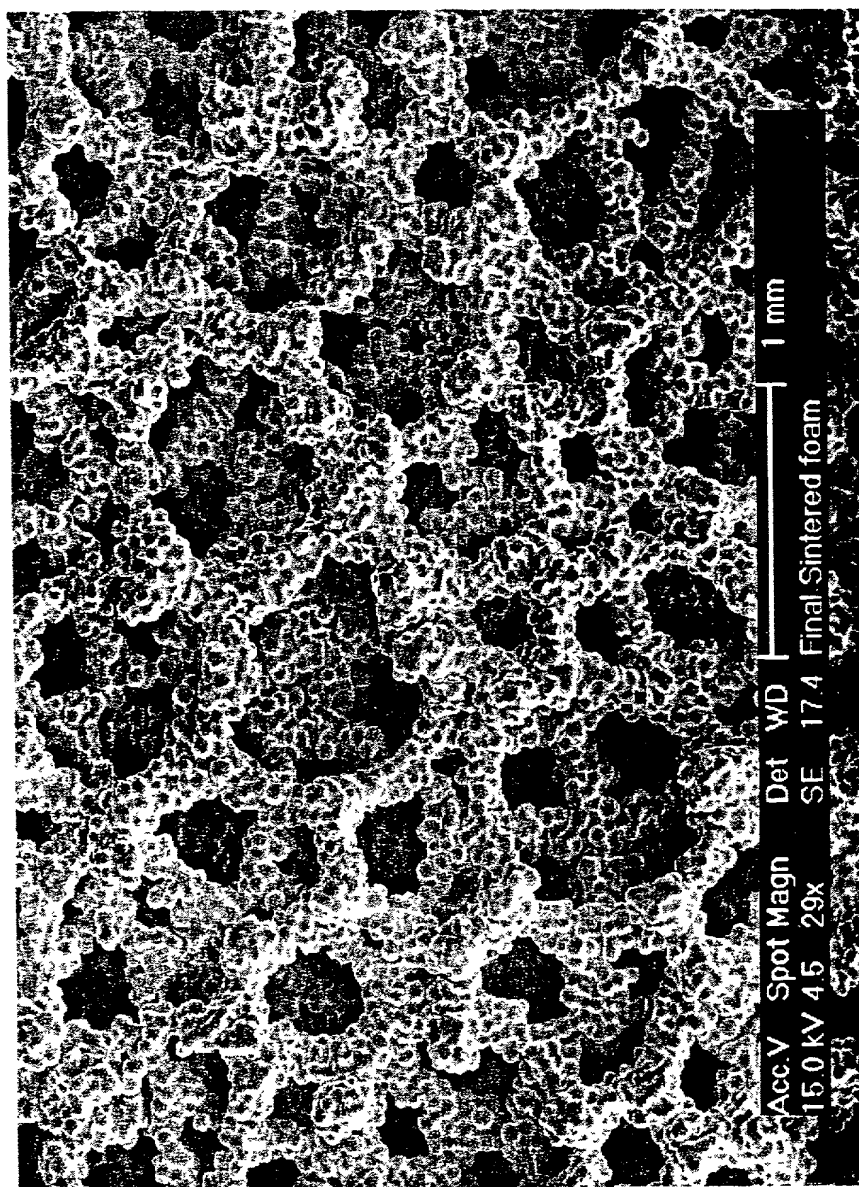


FIG. 13

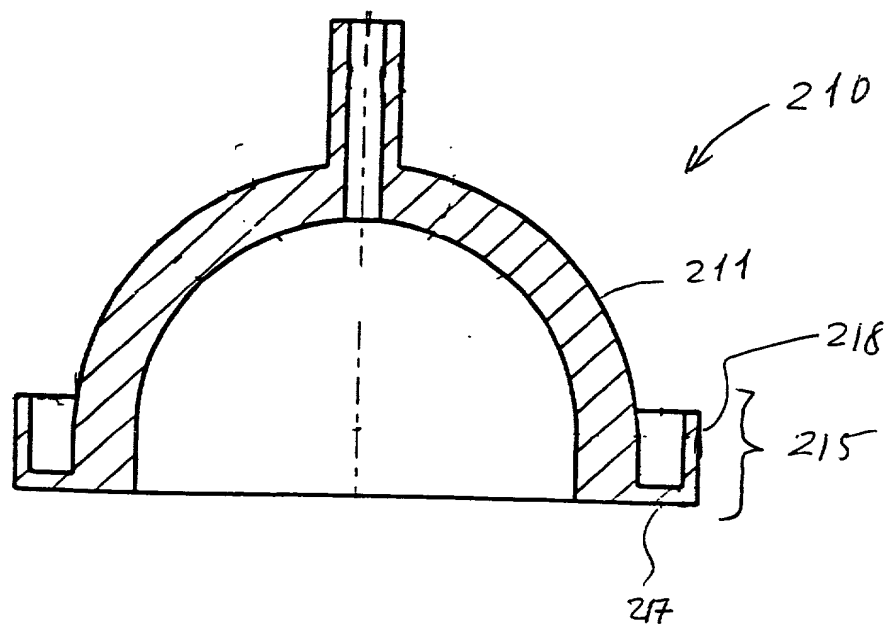


FIG. 14A

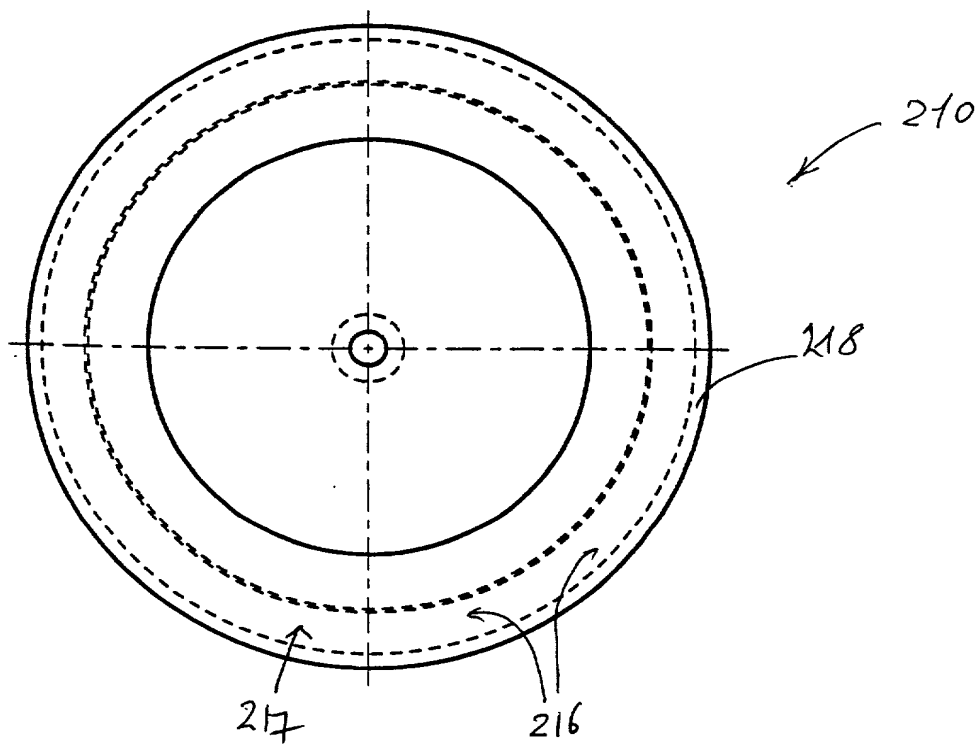


FIG. 14B

210

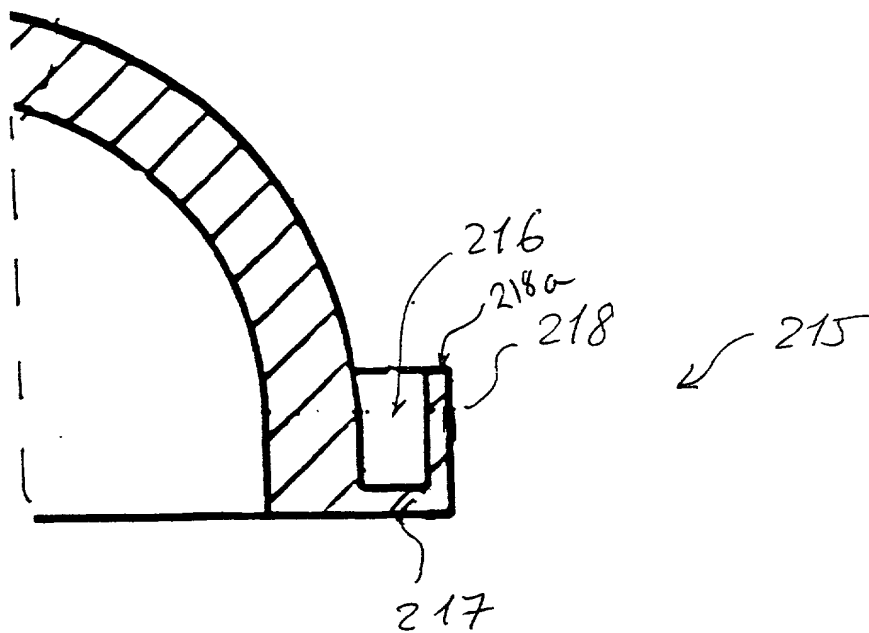


FIG. 14C

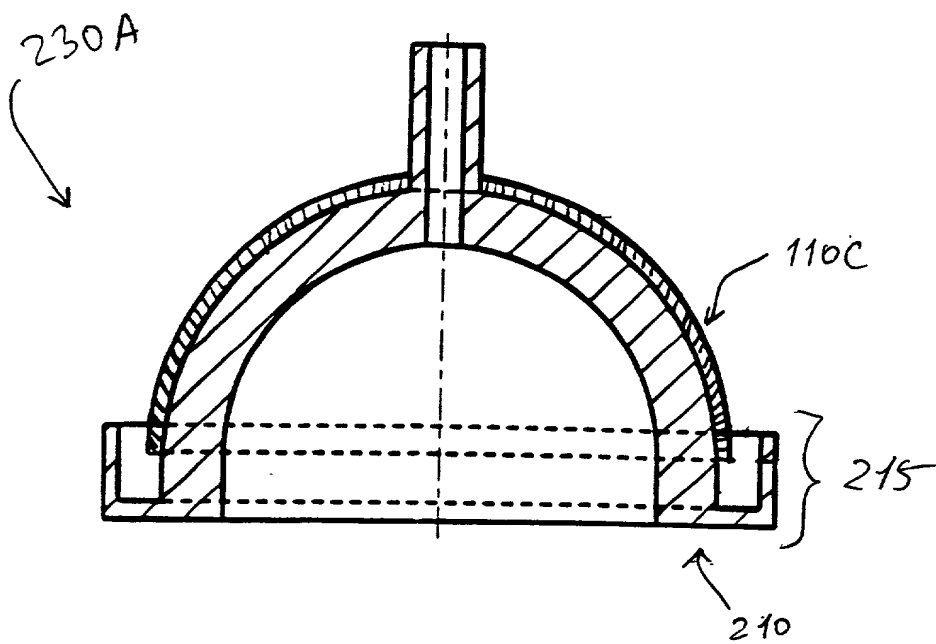


FIG. 15A

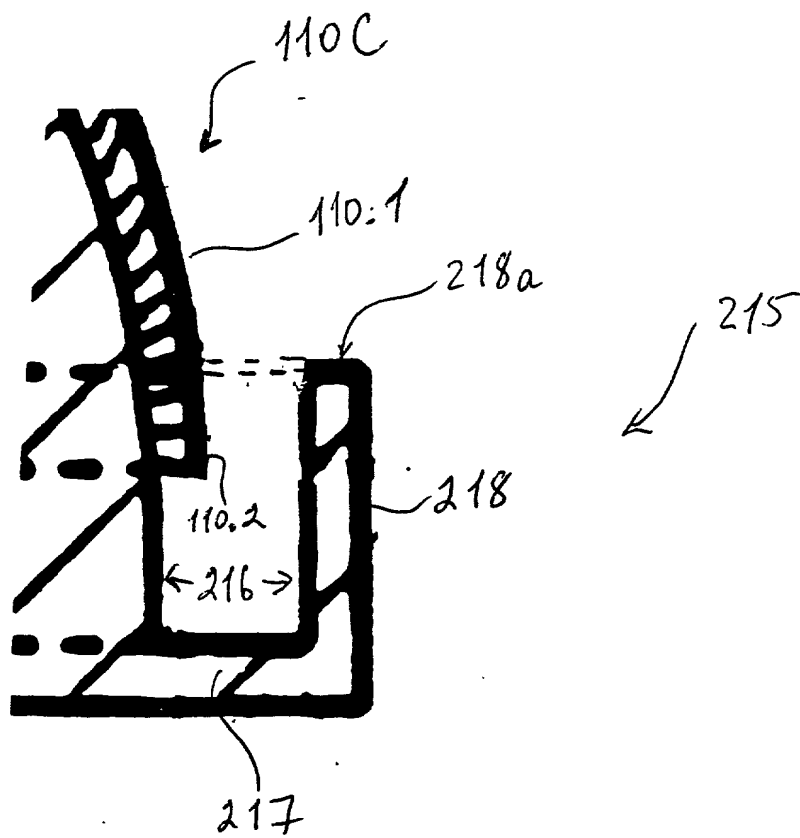


FIG. 15C

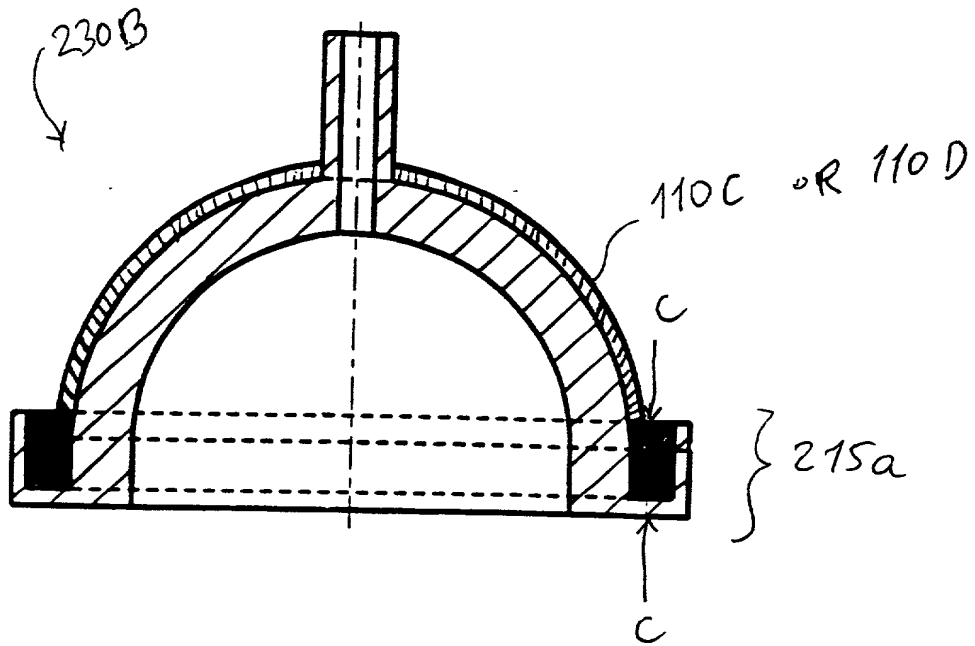


FIG. 16A

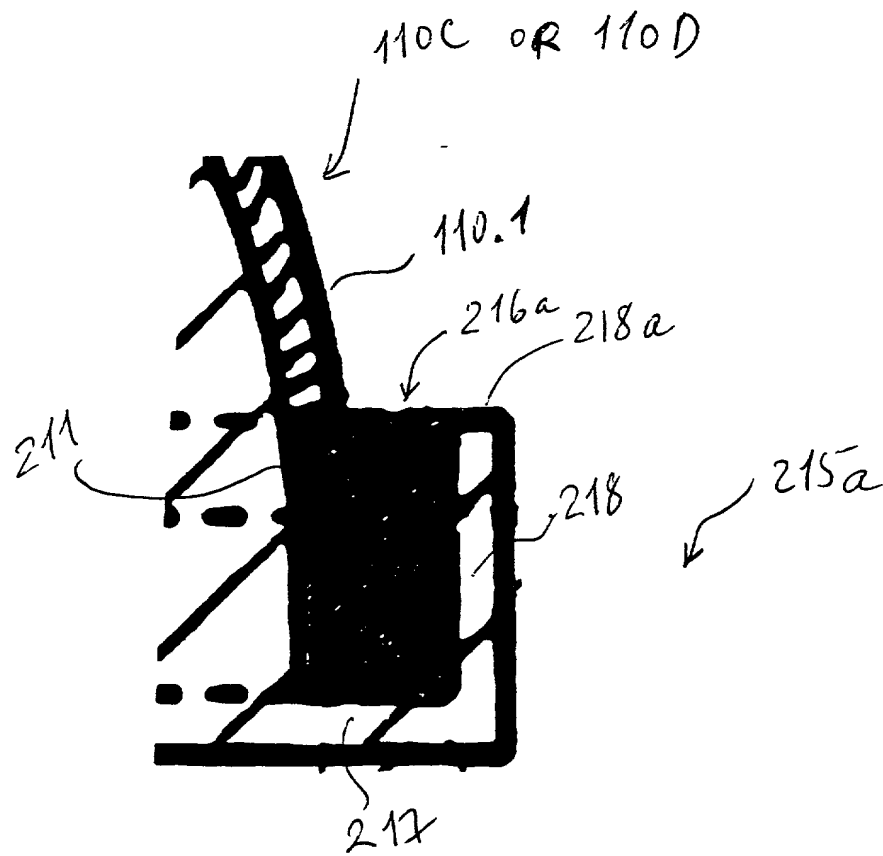


FIG. 16B

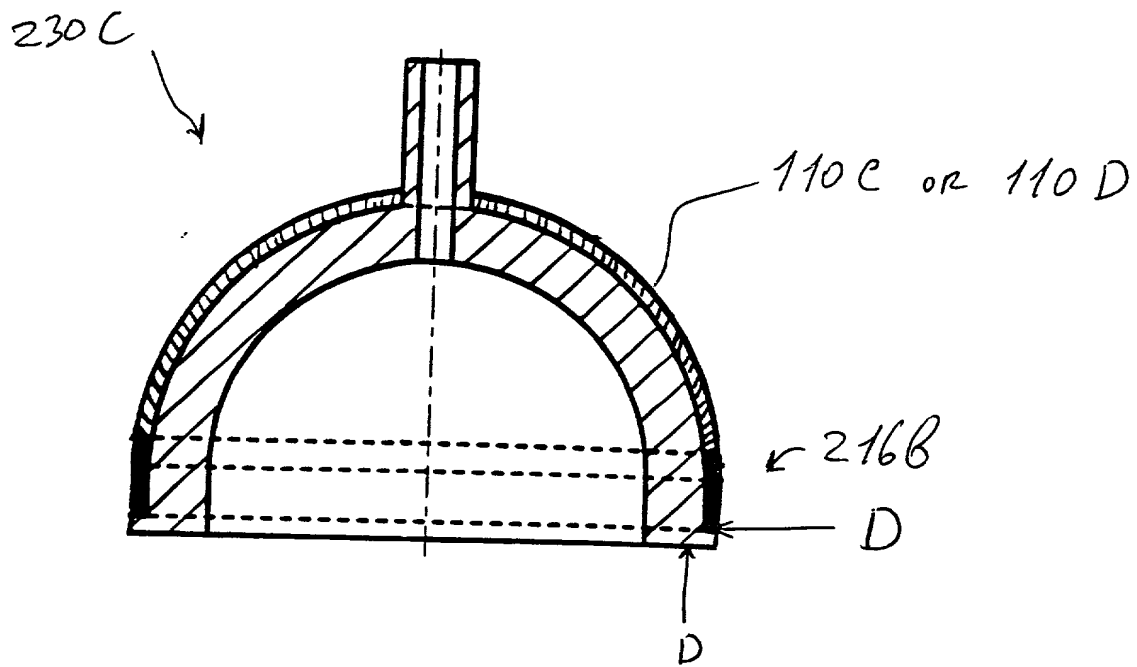


FIG. 17A

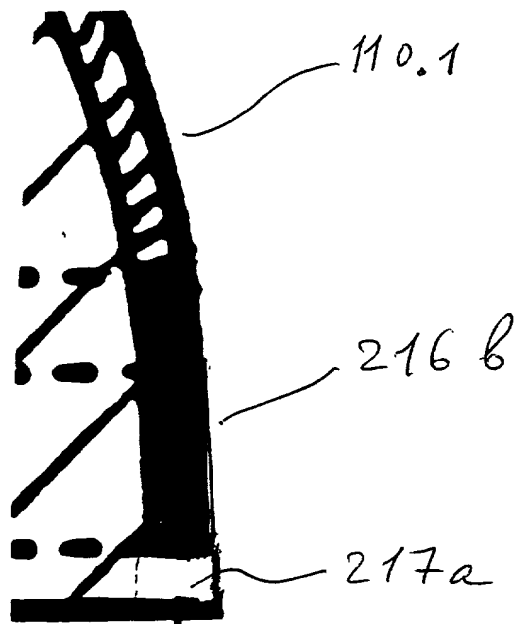
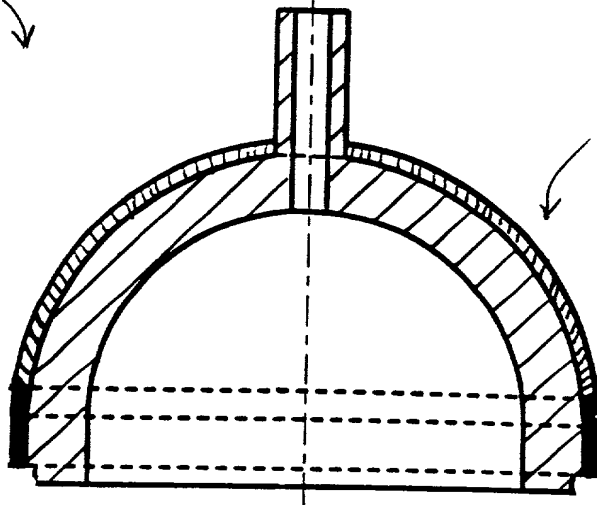


FIG. 17B

230D



110C or 110D



~ 216b

FIG. 18A

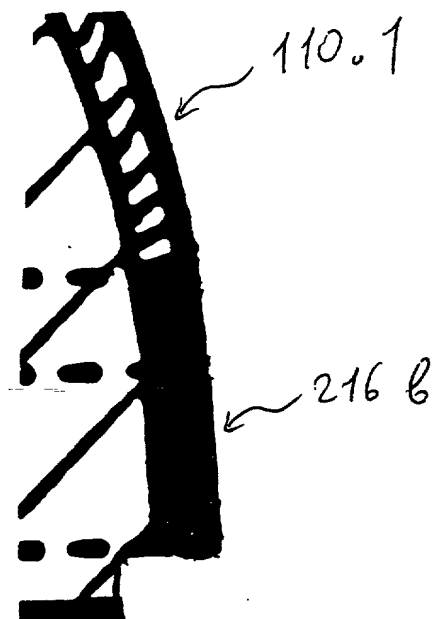


FIG. 18B